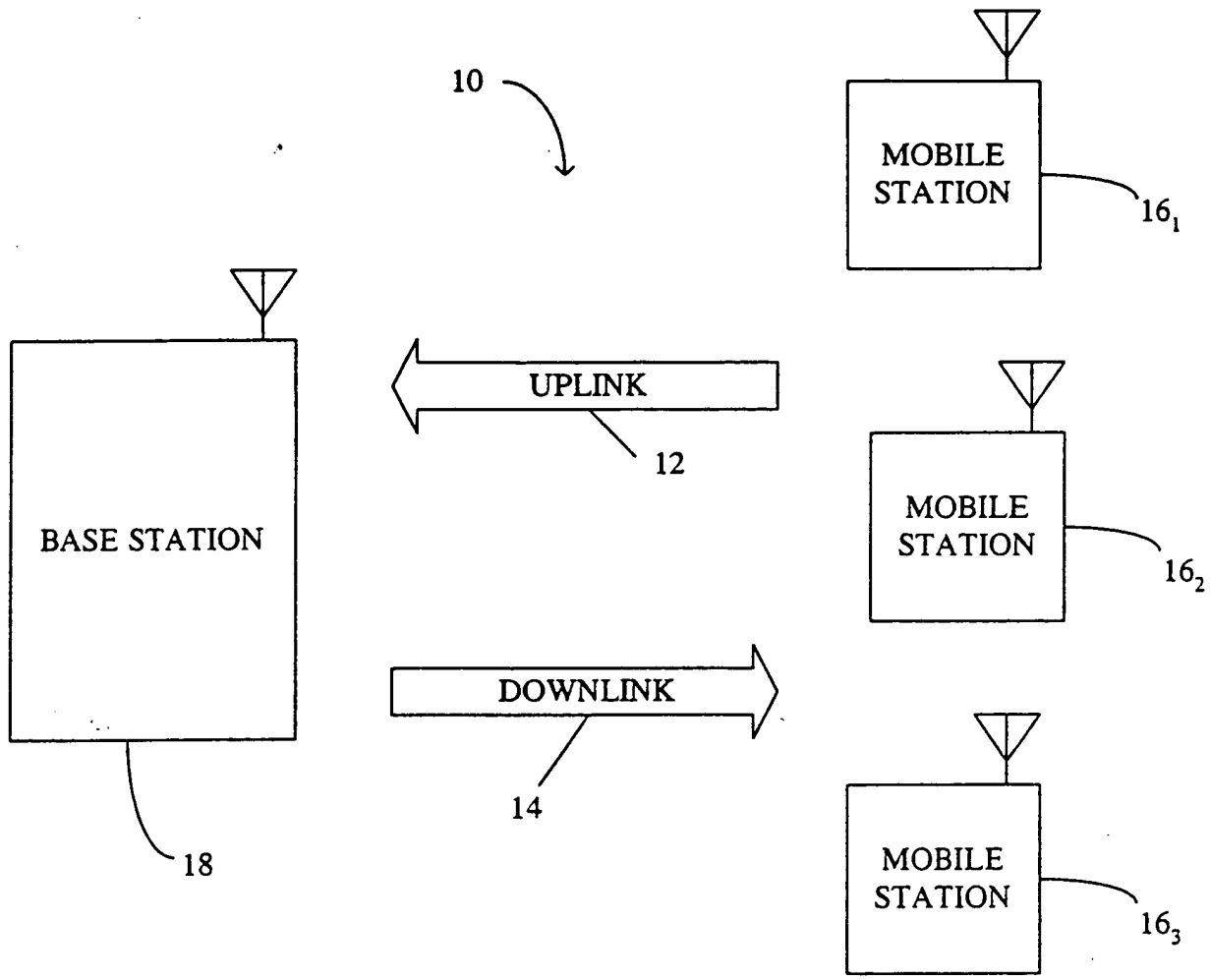

FIG. 1
PRIOR ART

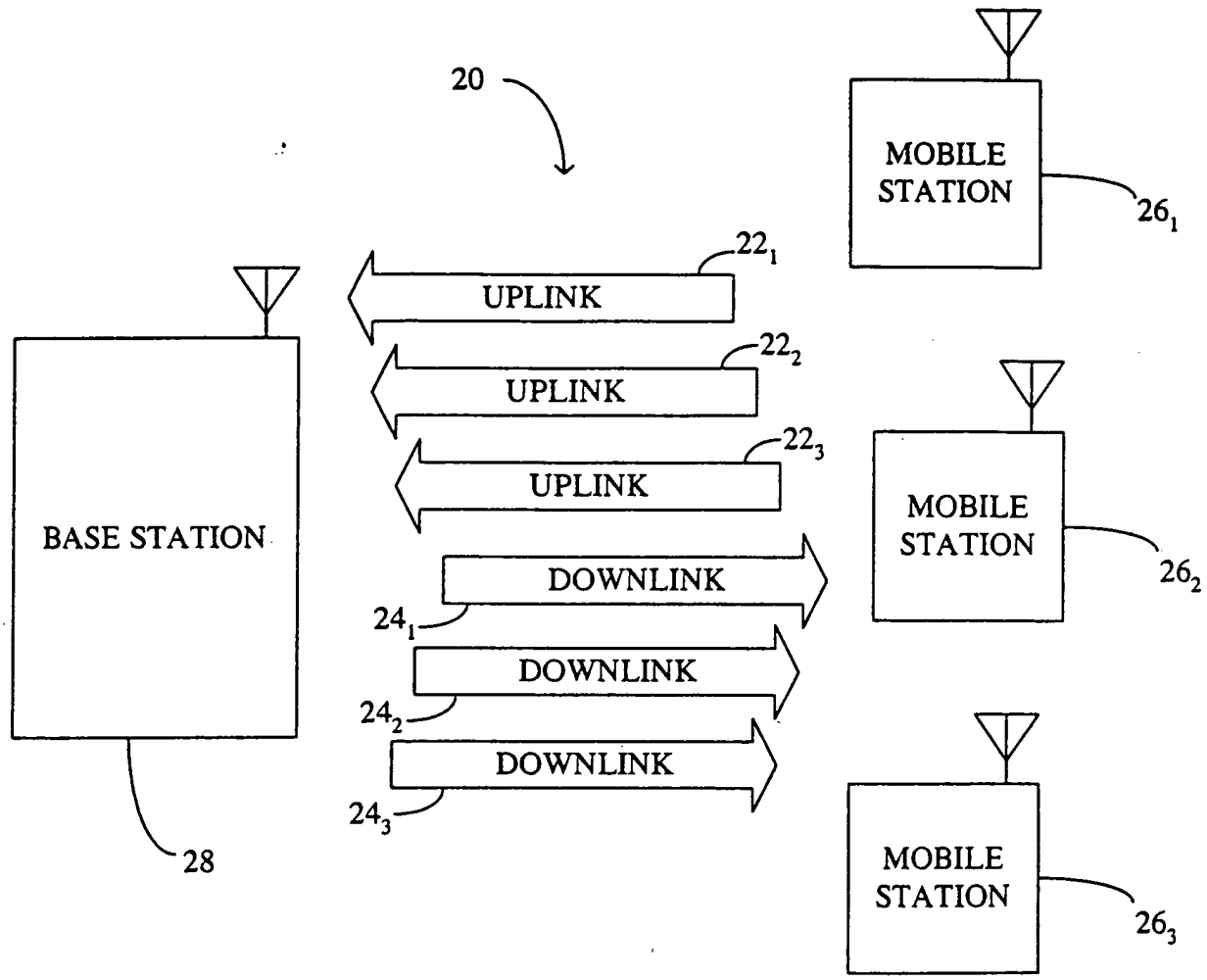

FIG. 2
PRIOR ART

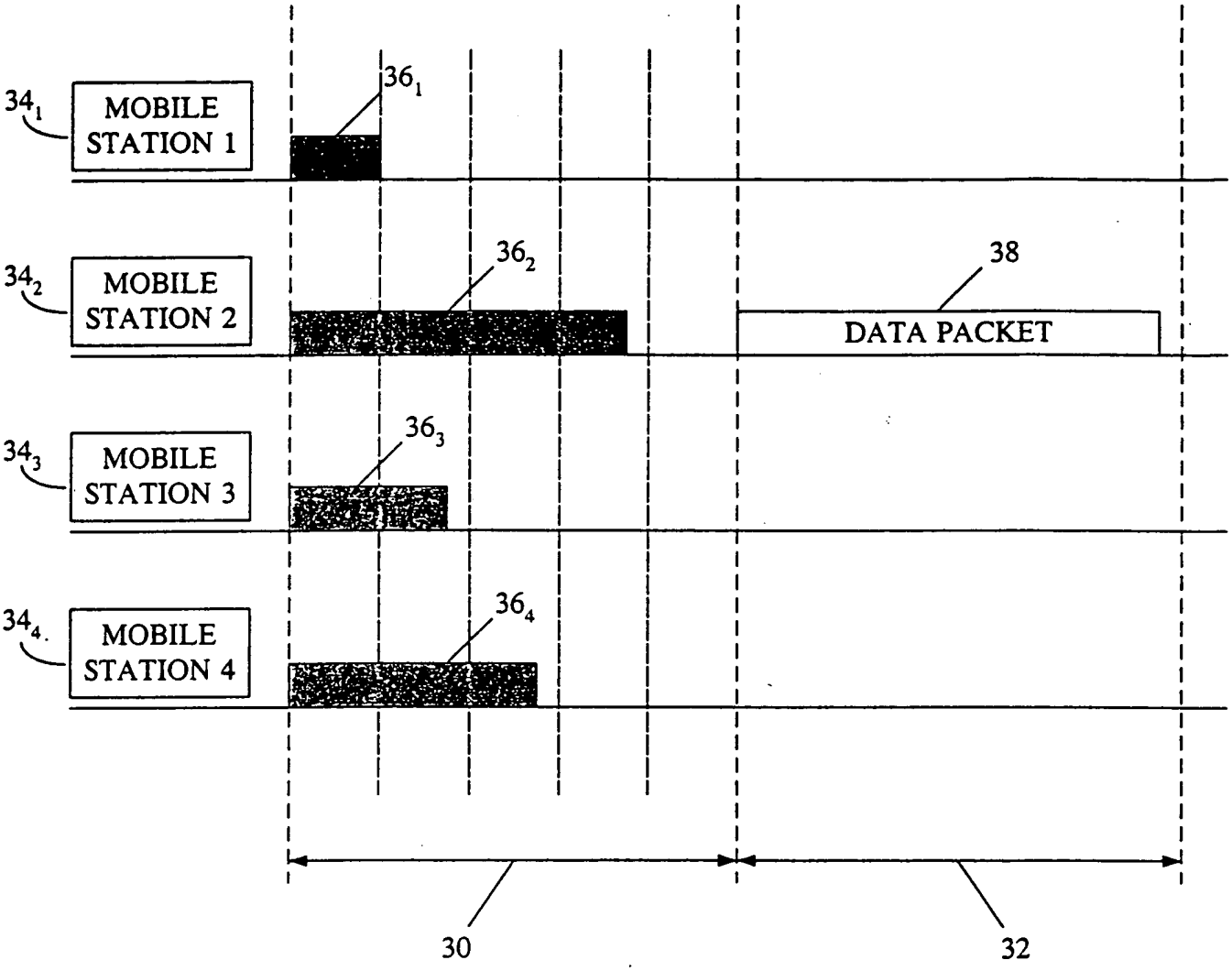

FIG. 3
PRIOR ART

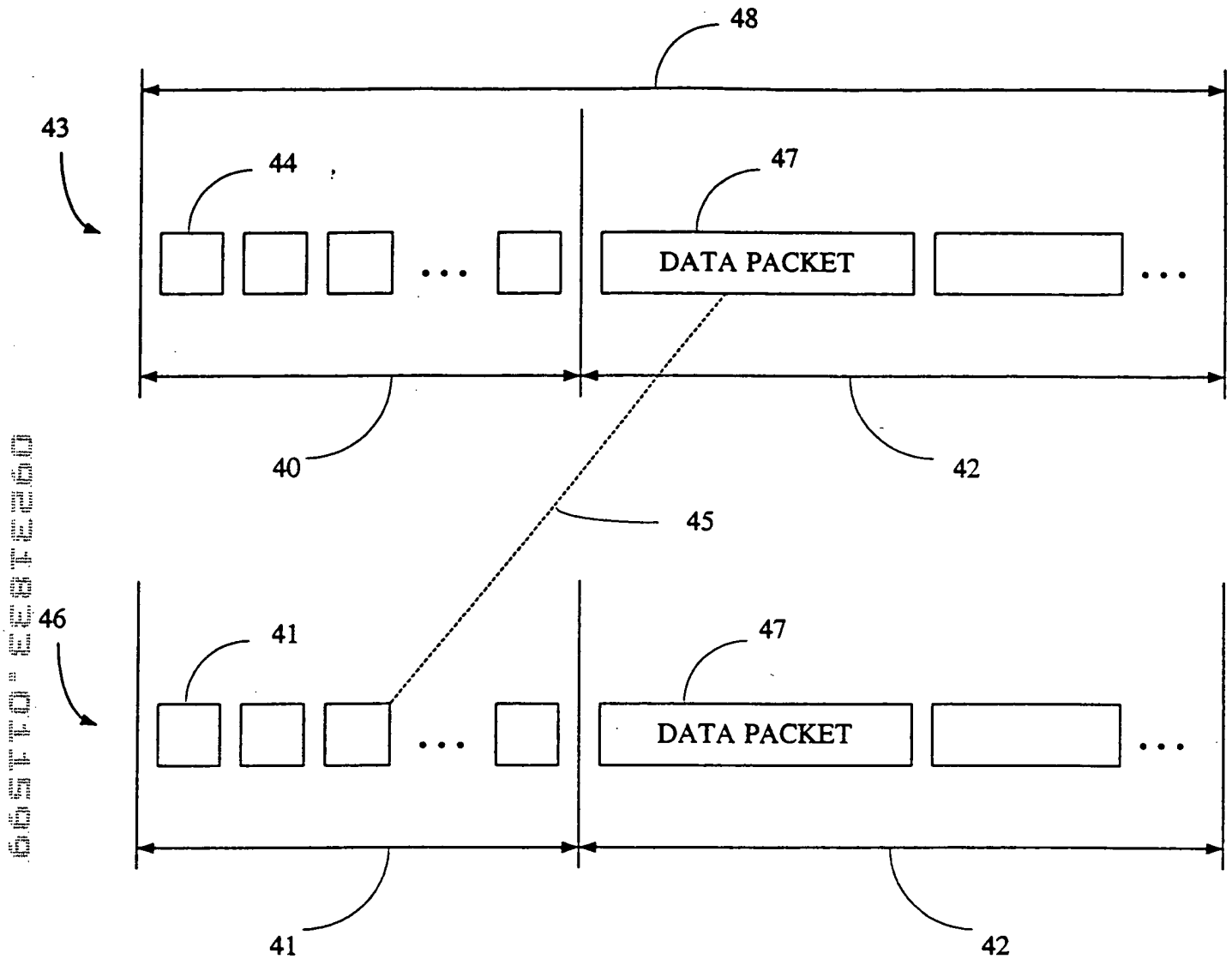

FIG. 4
PRIOR ART

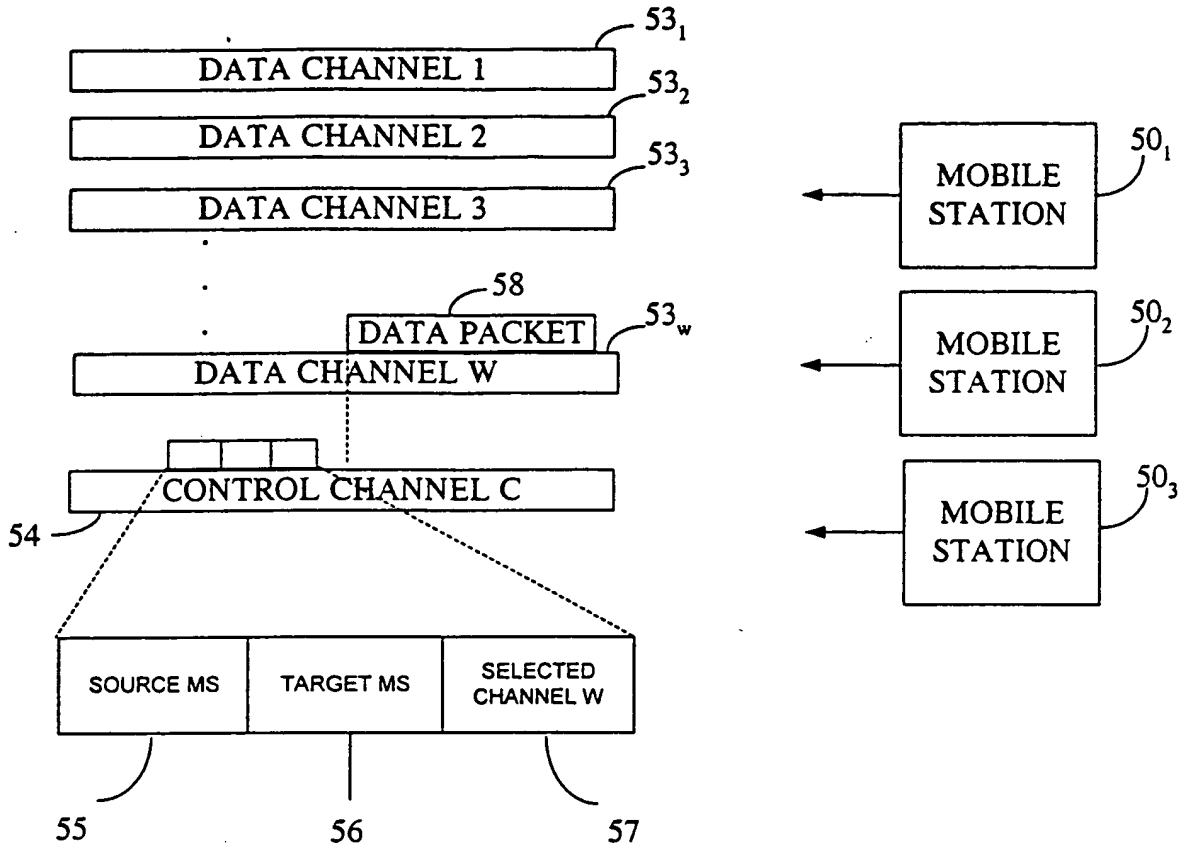

FIG. 5
PRIOR ART

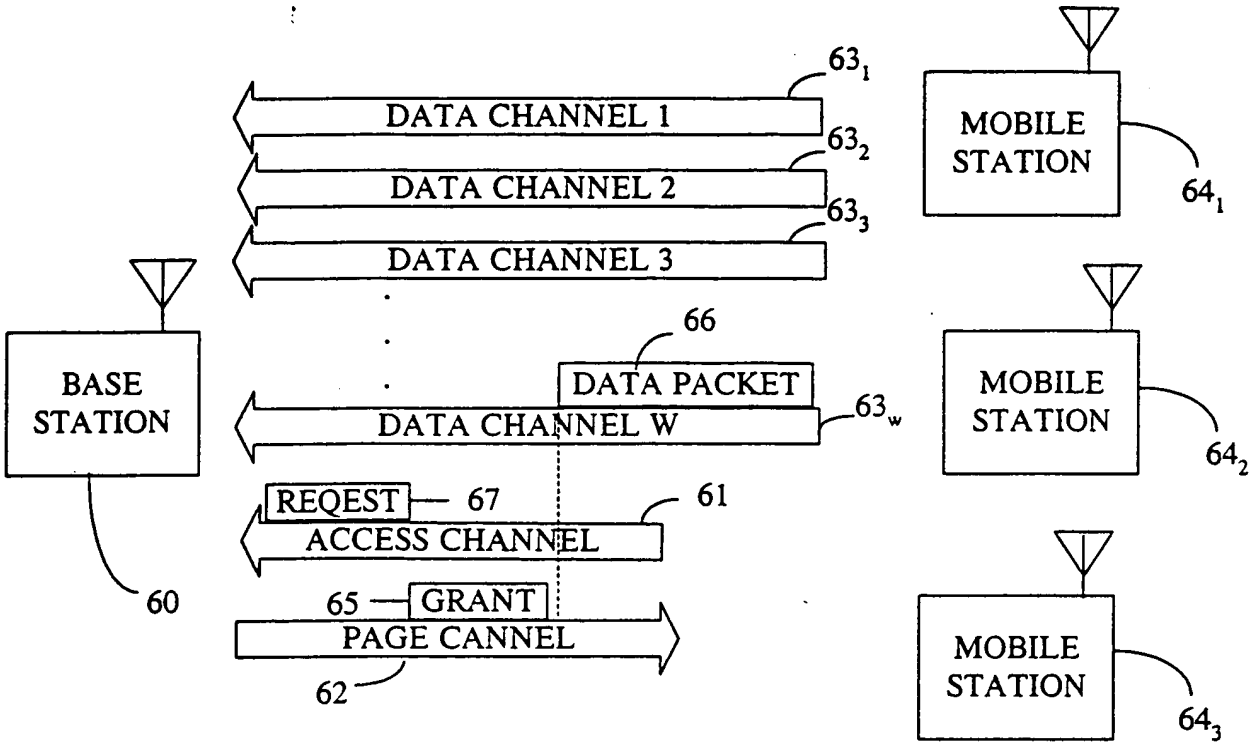

FIG. 6
PRIOR ART

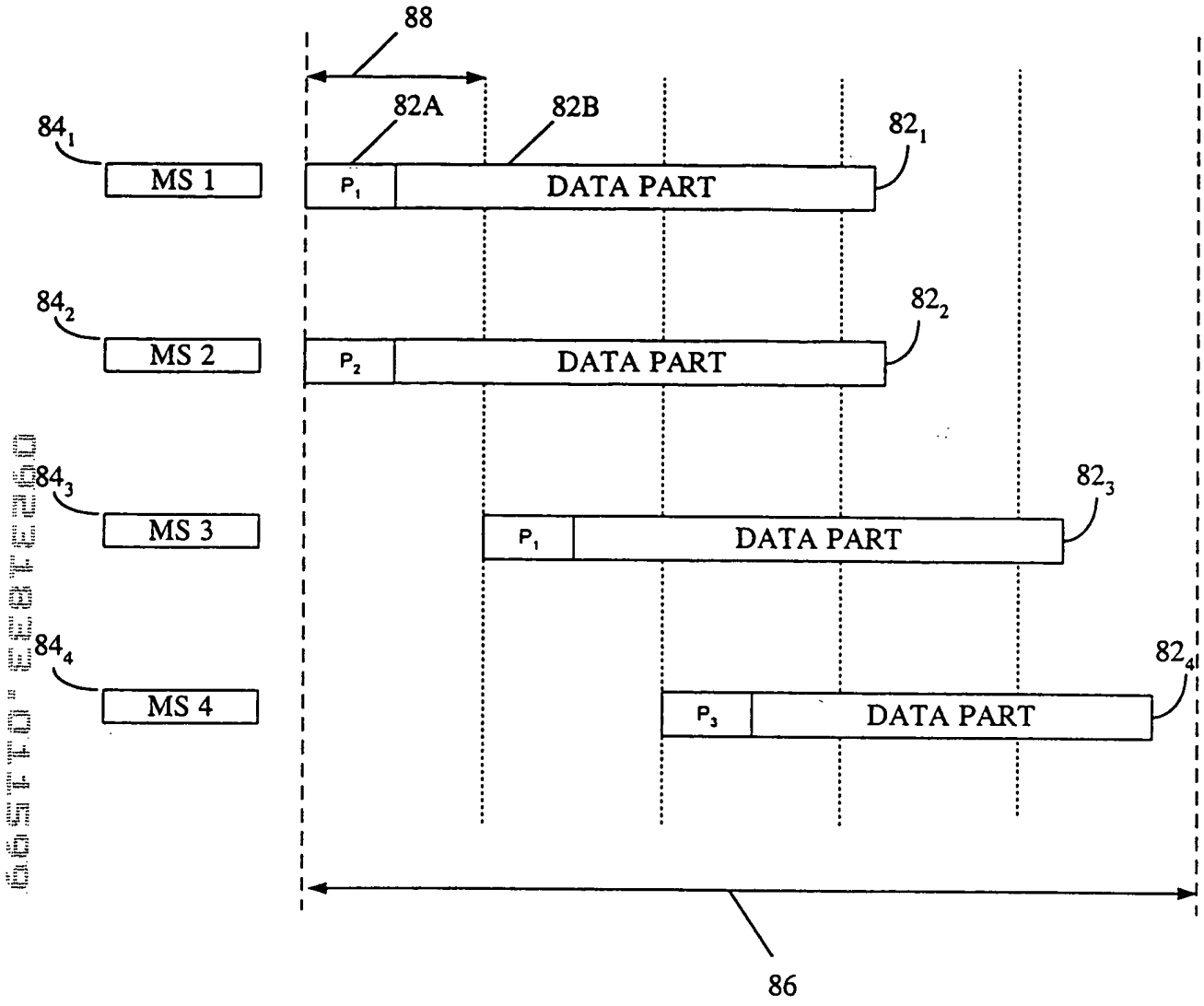

FIG. 7
PRIOR ART

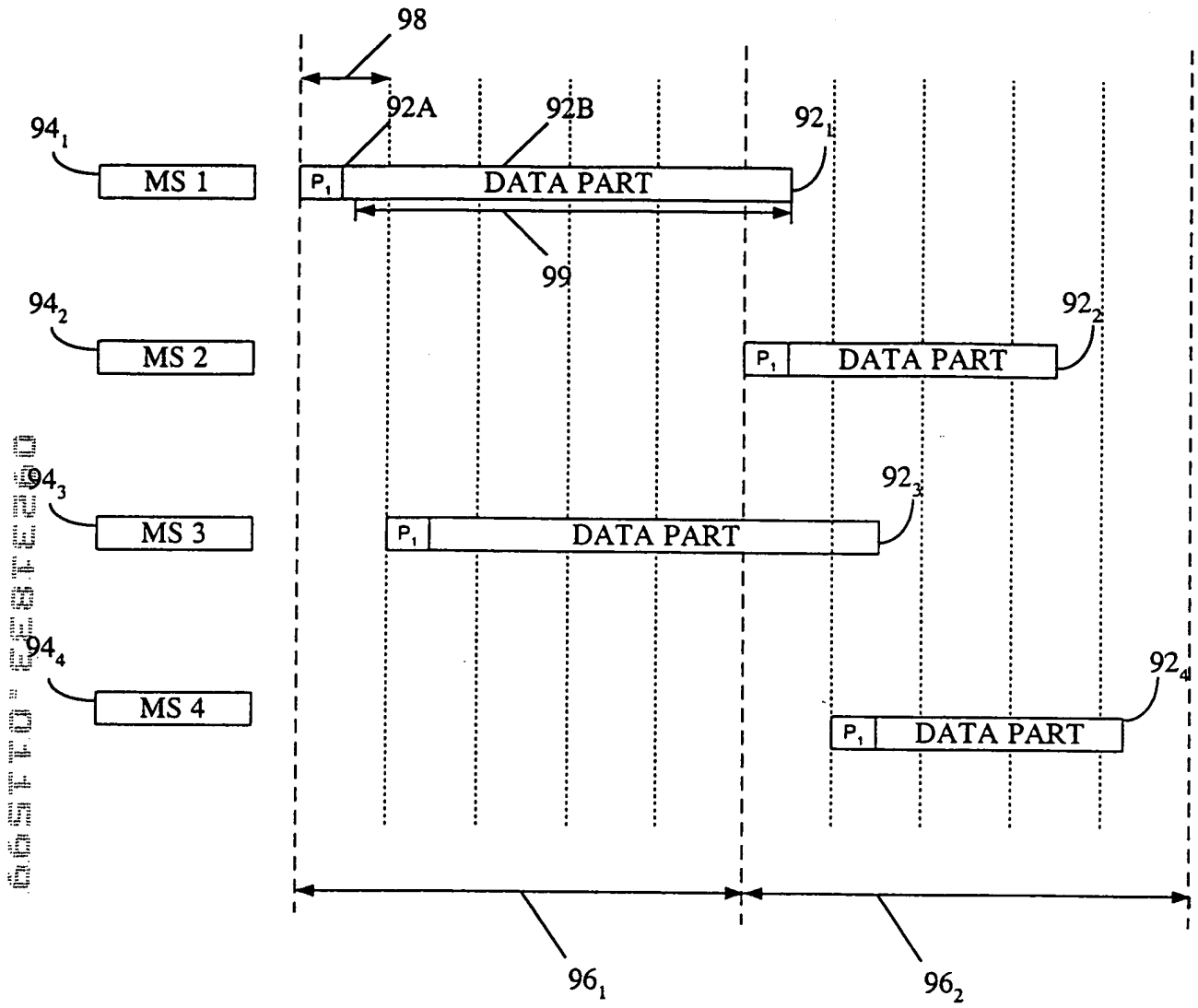

FIG. 8
PRIOR ART

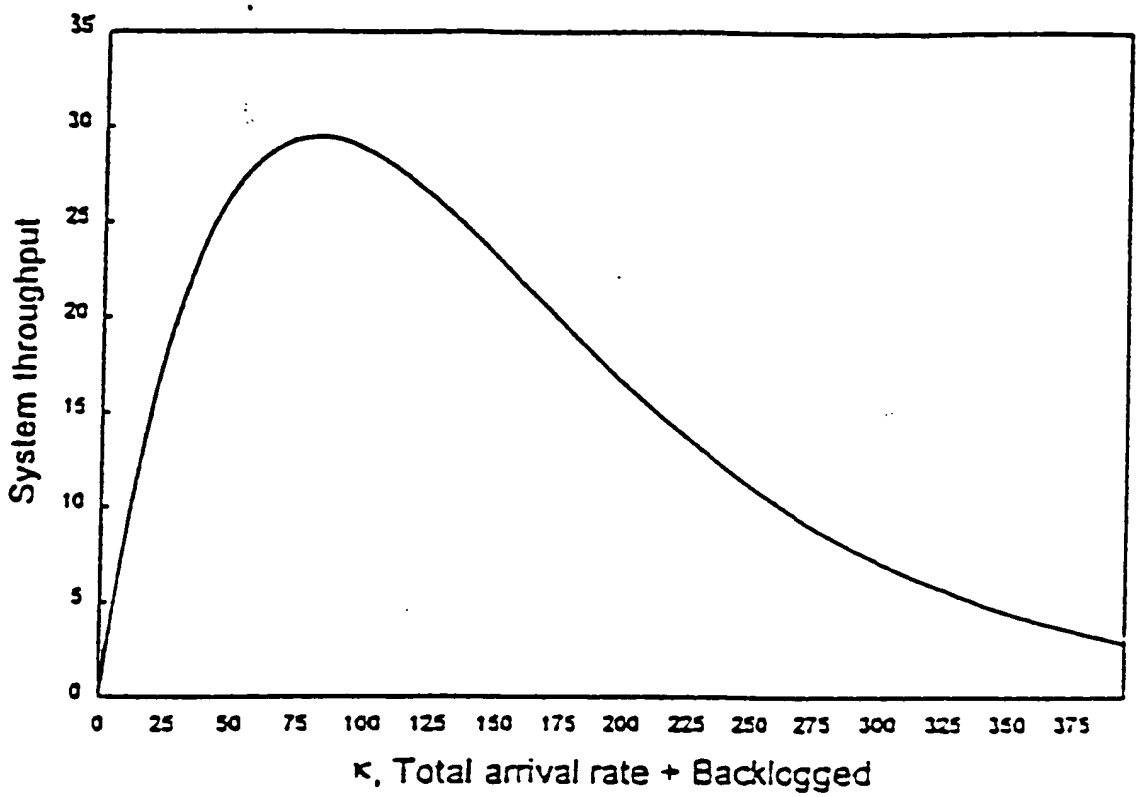

FIG. 9
PRIOR ART

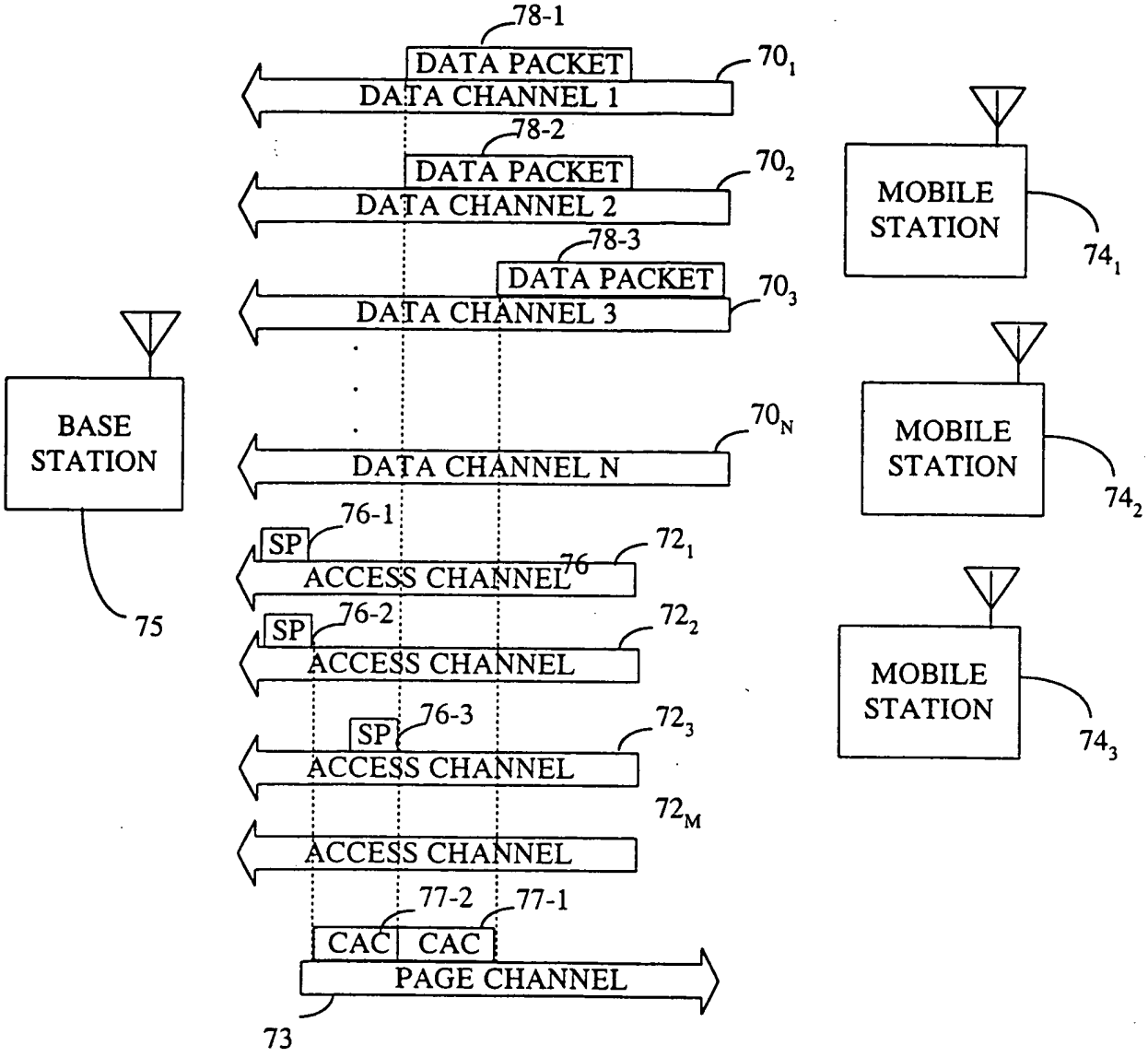
78-1
DATA PACKET
DATA CHANNEL 1
70_1
78-2
DATA PACKET
DATA CHANNEL 2
70_2
78-3
DATA PACKET
DATA CHANNEL 3
70_3
70_N
DATA CHANNEL N
BASE STATION
75
MOBILE STATION
74_1
MOBILE STATION
74_2
MOBILE STATION
74_3
76-1
SP
ACCESS CHANNEL
76
72_1
76-2
SP
ACCESS CHANNEL
72_2
76-3
SP
ACCESS CHANNEL
72_3
72_M
ACCESS CHANNEL
77-2
77-1
CAC
CAC
PAGE CHANNEL
73

FIG. 10

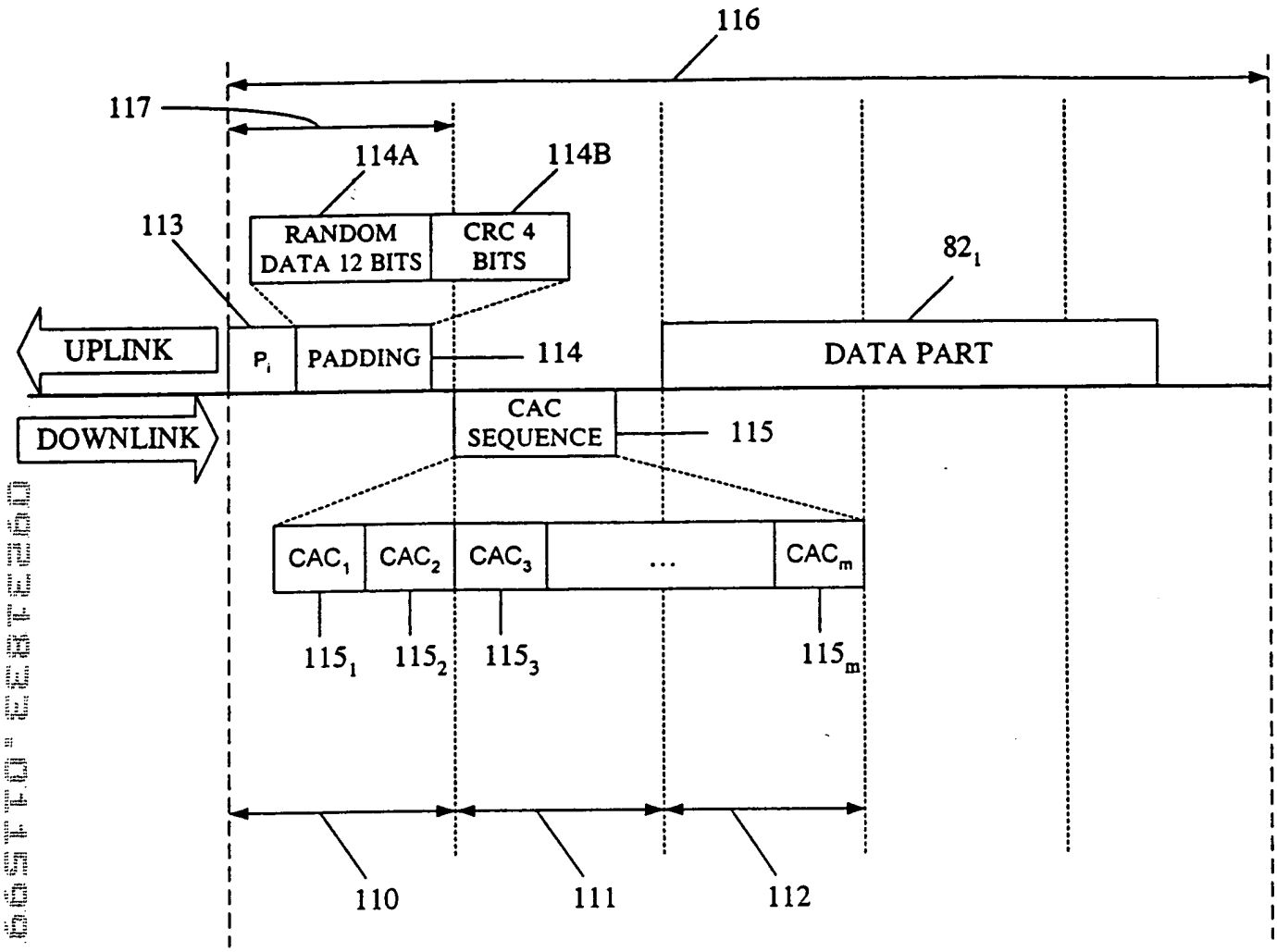
116
117
114A
114B
113
RANDOM DATA 12 BITS
CRC 4 BITS
82_1
UPLINK
P_i
PADDING
114
DATA PART
DOWNLINK
CAC SEQUENCE
115
CAC_1
CAC_2
CAC_3
...
CAC_m
115_1
115_2
115_3
115_m
110
111
112

FIG. 11

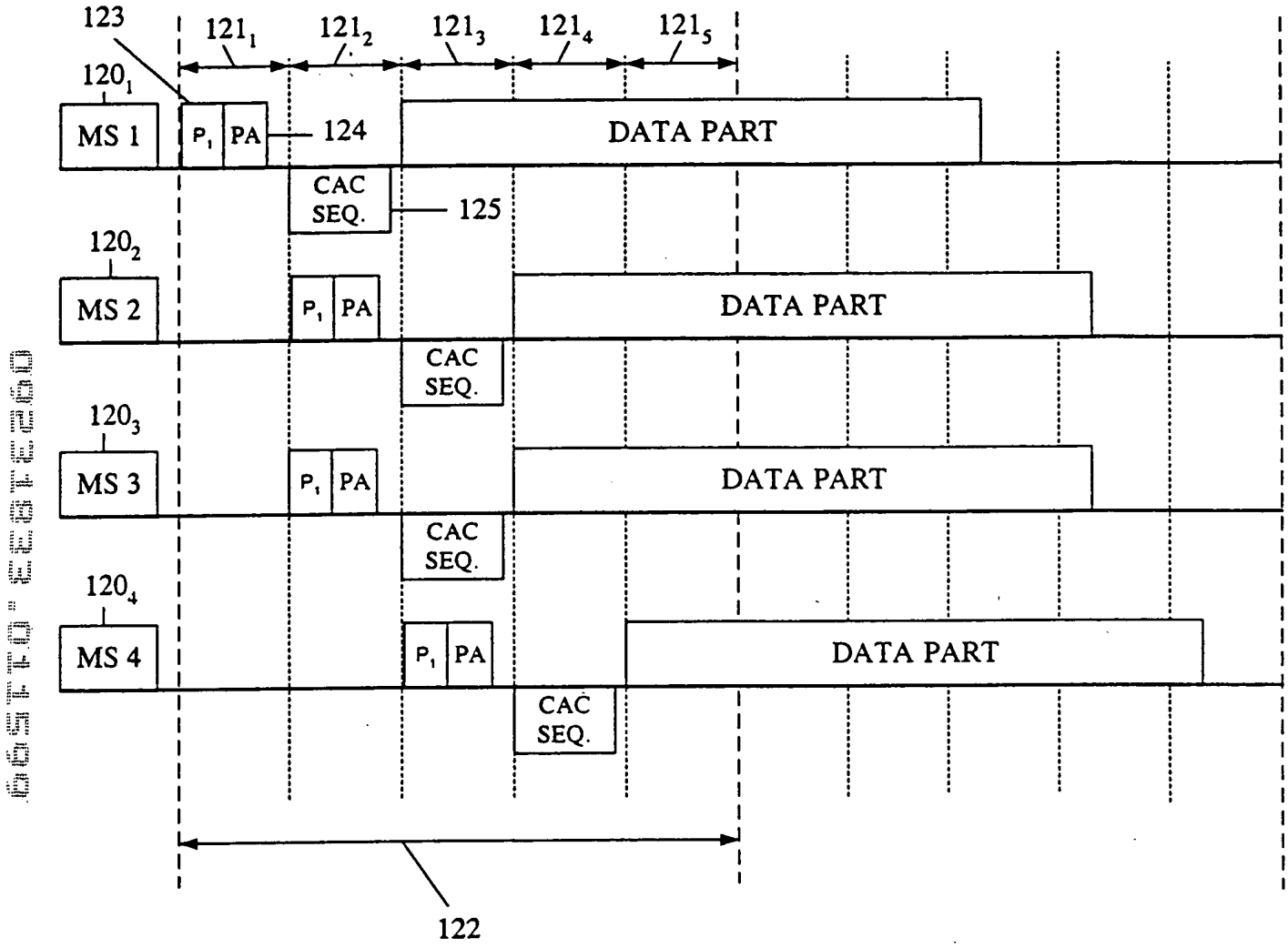
123
121_1
121_2
121_3
121_4
121_5
120_1
MS 1
P_1
PA
124
DATA PART
CAC SEQ.
125
120_2
MS 2
P_1
PA
DATA PART
CAC SEQ.
120_3
MS 3
P_1
PA
DATA PART
CAC SEQ.
120_4
MS 4
P_1
PA
DATA PART
CAC SEQ.
122

FIG. 12

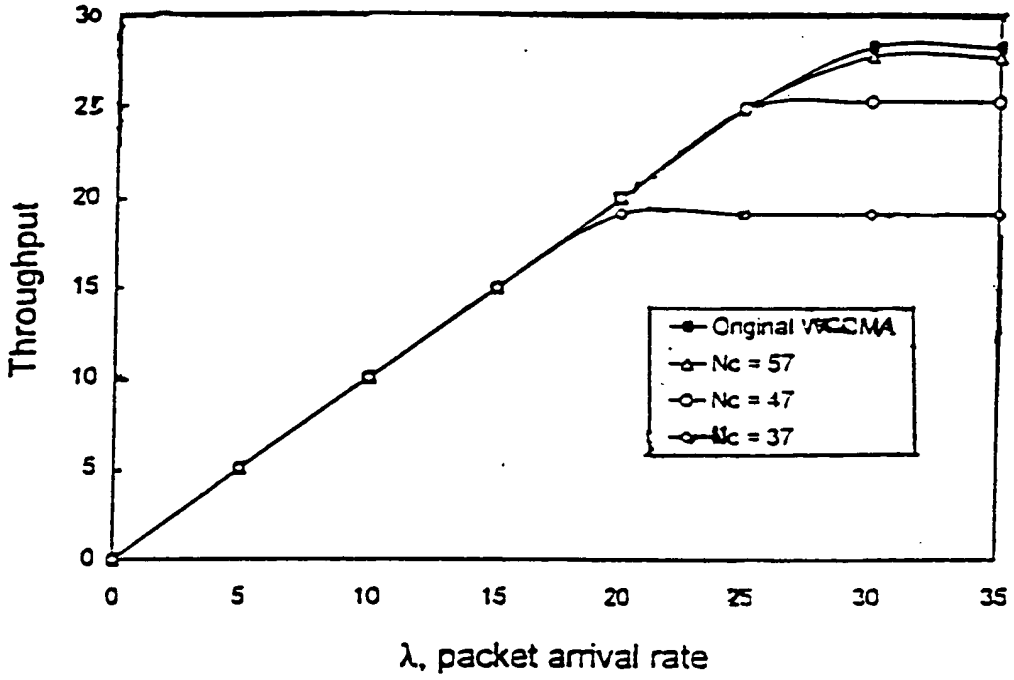
Throughput
λ, packet arrival rate
0
5
10
15
20
25
30
35
Orginal VSCCMA
Nc = 57
Nc = 47
Nc = 37

FIG. 13

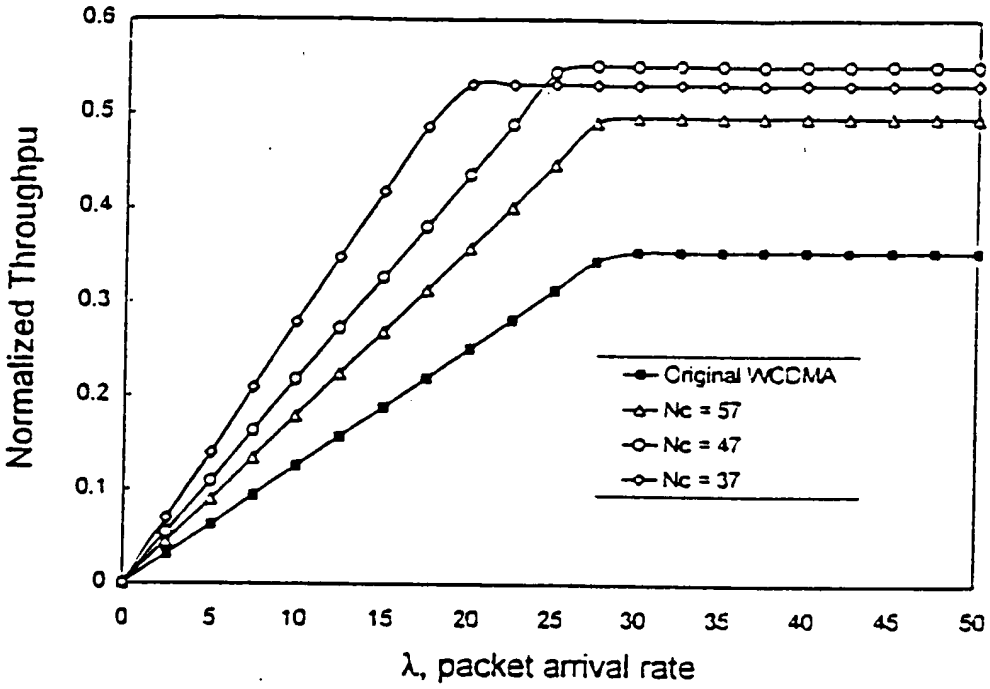
Normalized Throughpu
0.6
0.5
0.4
0.3
0.2
0.1
0
0
5
10
15
20
25
30
35
40
45
50
λ, packet arrival rate
Original WCDMA
Nc = 57
Nc = 47
Nc = 37

FIG. 14

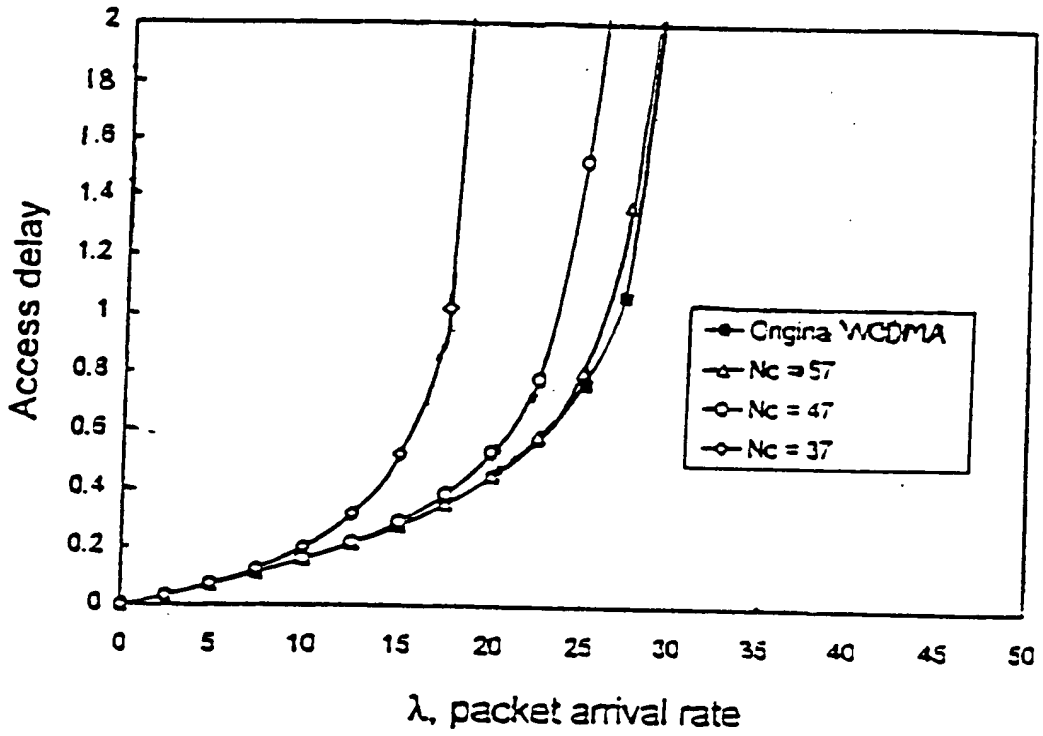
Access delay
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
5
10
15
20
25
30
35
40
45
50
λ, packet arrival rate
Orgina WCDMA
Nc = 57
Nc = 47
Nc = 37

FIG. 15

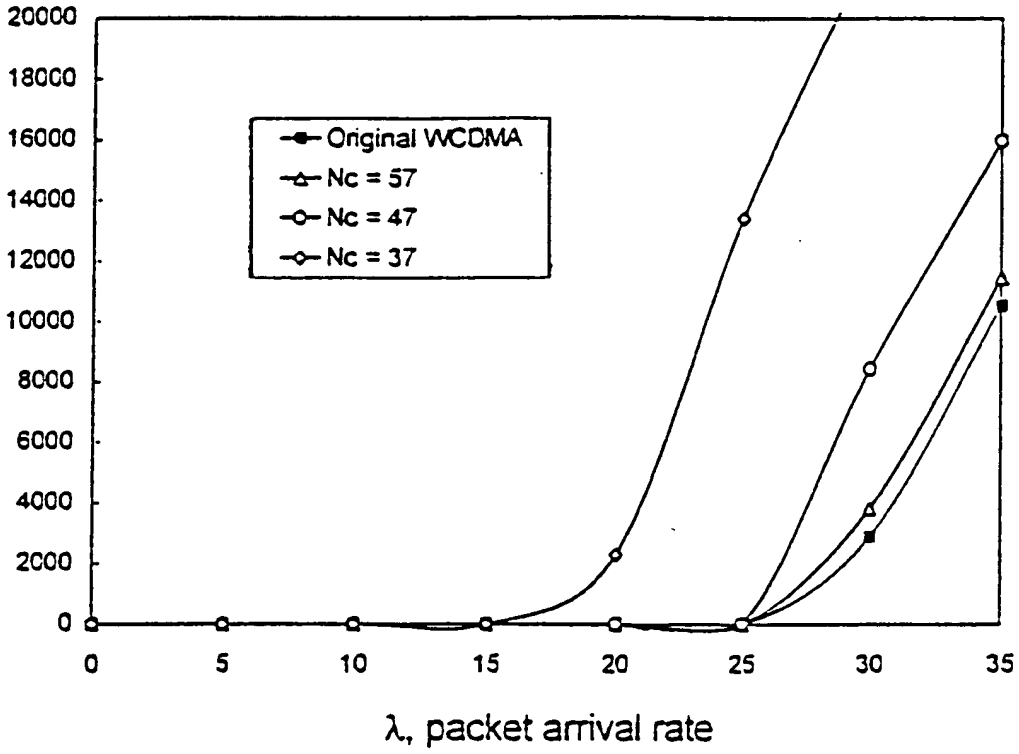
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35
Original WCDMA
Nc = 57
Nc = 47
Nc = 37
λ, packet arrival rate

FIG. 16